UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/726,677	11/29/2000	Matti Halme	BER-017	2037

26717 7590 10/28/2004

RONALD CRAIG FISH, A LAW CORPORATION
PO BOX 820
LOS GATOS, CA 95032

EXAMINER	
JUNTIMA, NITTAYA	

ART UNIT	PAPER NUMBER
2663	

DATE MAILED: 10/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/726,677	HALME, MATTI	
	Examiner	Art Unit	
	Nittaya Juntima	2663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 June 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) *1-6* is/are withdrawn from consideration.

5)☒ Claim(s) *10,13, and 14* is/are allowed.

6)☒ Claim(s) *7-9,11 and 12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 June 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This action is in response to the amendment filed on June 28, 2004.

1. The objections to drawings and specification are withdrawn in view of applicant's amendment.

2. Claims 1-6 are cancelled as per applicant's amendment.

3. Claims 7-9 and 11 are presently rejected under 35 U.S.C. 102 (b).

4. Claim 12 is presently rejected under 35 U.S.C. 103 (a).

5. Claim 10 is now allowed as per applicant's amendment.

6. Claims 13 and 14 are allowed.

Claim Objections

7. Claims 7 and 11-14 are objected to because of the following informalities:

- in claims 7, ll 12, "and" should be added after a semicolon;

  19, "and/or" should be changed to "and;"

- in claim 11, ll 21, "and/or" should be changed to "and;"

- in claim 12, ll 8, 16, and 23, "and/or" should be changed to "and;"

- in claim 13, ll 20, and 28, "and/or" should be changed to "and;"

- in claim 14, ll 22 and 30, "and/or" should be changed to "and."

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 7-9 and 11 are rejected under 35 U.S.C. 102(b) as being as being anticipated by Bellovin et al. (USPN 5,870,557).

Per claim 7, as shown in Fig. 2, Bellovin et al. teach a method for selection of a route for transmission of data packets, said method comprising:

- providing a source network site (202) with a first plurality of network service provider connections (connection 202A-A and connection 202B-G) connecting said source network site (202) to a network (Internet 203) (col. 1, ll 37-52);

- providing a destination network site (web site 210) with a second plurality of network service provider connections (connection G-F-D and connection A-C-D) connecting the destination network site (210) to said network (203) (col. 1, ll 37-52 and col. 6, ll 52-60);

- determining, at the source network site (202), at least one of a round trip time value (round trip time) and a packet success rate value (packet lost over the hops) for each combination of individual source and destination network service provider connections configurable among the first and second plurality network service provider connections (round trip time and packet lost over the hops for each combination of source and destination connections, i.e. 202A-A-C-D and 202B-G-F-D, is calculated, col. 5, lines 63-col. 6, lines 1-15 and 42-60); and

- selecting, at the source network site, a route comprised of a first network service provider connection (202B-G) among said first plurality of network service provider connections (202B-G and 202A-A) and a second network service provider connection (G-F-D) among said second plurality of network service provider connections (G-F-D and A-C-D), said selection of a route made on the basis of at least one of said factors of said round trip time value determined at said source network site for each route combination of source and destination network service provider connections, and said packet success rate value determined at said source network site for each combination of source and destination network service provider connections (the Internet access provider 202 selects a connection AP 202B-G and a connection G-F-D as a route to web site 210 because of its low congestion, i.e. round trip delay and packets lost over the hops, col. 5, lines 63-66 and col. 6, lines 42-60).

Per claim 8, Bellovin et al. teach that the steps of selecting a route is performed at least in part based also upon the time elapsed after said selection of a route was previously changed (the time elapsed reads on time T2, col. 3, lines 18-38).

Per claim 9, Bellovin et al. teach that the selections of node links and hops generally remain stable for a few minutes (col. 3, lines 28-32). Therefore, it is inherent that an amount of change in the packet success rate and/or round trip time of a connection required to cause a change in the route selection must reduce as a function of time during these few minutes.

Claim 11 is a network node (Internet Access Provider 202 in Fig. 2) claim corresponding to method claim 7, and is therefore rejected for the same reason set forth in the rejection of claim 7.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bellovin et al. (USPN 5,870,557).

Claim 12 is a computer software product for a system corresponding to method claim 7, and is rejected under the same reason set forth in the rejection of claim 7, with an addition that Bellovin et al. do not teach a computer software product and the computer software code means as recited in the claim. However, it would have been obvious to one skilled in the art at the time the invention was made to include the computer software code means into the computer software product as recited in claim 12 for automatic execution of the claimed steps of claim 7 and for portability purposes.

Allowable Subject Matter

12. Claims 13 and 14 are allowed. The prior art alone or in combination fails to teach or makes obvious on the following when considered in combination with other limitations in the claim: the VPN gateway node(s) having means for selecting a VPN connection based on a round trip time value or packet success rate value for each combination of source and destination network service provider connections as recited in the claims.

Response to Arguments

13. Applicant's arguments regarding claims 7-9, 11, and 12 have been fully considered but they are not persuasive.

A. Regarding independent claims 7, 11, and 12, the applicant argues that in Bellovin et al., only one ISP is available, so Bellovin et al. does not anticipate any claim that calls for multiple connections.

In response, multiple connections, i.e. "a first plurality of network service provider connections" and "a second plurality of network service provider connections," recited in claims 7, 11, and 12 are interpreted as plurality of connections provided by network service provider, rather than connections provided by multiple ISPs as argued by the applicant. Therefore, using the broadest interpretation, Bellovin et al., as shown in Fig. 2, do teach "a first plurality of network service provider connections" (connection 202A-A and connection 202B-G) and "a second plurality of network service provider connections" (connection G-F-D and connection A-C-D) since connections 202A-A, 202B-G, G-F-D, and A-C-D are provided by nodes 202A, 202B, A-G who provide network service. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

B. The applicant also argues that Bellovin et al. fails to teach or suggest that the destination network site is provided with a second plurality of network service provider ISP connections connecting the destination network site to the network, and that nodes A, B, C, D, E, F, and G are routers within the Internet, and they are not network service providers which do the function of an ISP to provide a connection from a destination network site to a network such as the Internet.

In response, note that claims 7, 11, and 12 call for the destination network site that is provided with a second plurality of network service provider connections (not a second plurality of ISP connections) connecting the destination network site to the network. Referring to Fig. 2, Bellovin et al. teach a web site 210 that is provided with connections G-F-D and A-C-D connecting the website to the Internet 203. Since the function of the network service provider is not defined, the claimed destination network site reads on the web site 210 to which user at 201 is connected, and the claimed second plurality of network service provider connections read on connections G-F-D and A-C-D which connect web site 210 to the Internet 203. Nodes A-G are within the Internet 203 and must be network service providers because each provides network service, i.e. providing connections within the Internet. As a result, the connections between these nodes which connect the web site 210 to the Internet 203 (col. 1, ll 37-52 and 61-63) must be network service provider connections, i.e. connections of network service providers. Therefore, Bellovin et al. do teach that the destination network site (210) is provided with a second plurality of network service provider connections (connections G-F-D and A-C-D) connecting the destination network site to the network (203) as recited in the claims.

C. The applicant further argues that Bellovin et al. fails to teach or suggest (i) a step or means for determining, at the source network site, at least one of a round trip time value and a packet success rate value for each route combination comprised of individual source and destination network service provider connections to the Internet (which are configurable into a plurality of different routes), and (ii) a step or means for selecting, at the source network site, a first network service provider connection among the first plurality of network service provider connections and a second service provider connection among a second plurality of network

service provider connections on the basis of at least one of the determined round trip time value for each combination of source and destination network service provider connections, and the determined packet success rate value for each combination of source and destination network service provider connections because in the system of Bellovin et al., there is only one Internet access provider for the user and no Internet access provider for the destination website. Therefore, no plurality of routes comprised of combinations of different source ISP and destination ISP connections to the Internet can be configured. This means that no round trip time value and no packet success rate can be calculated for each such route in Bellovin et al. and no selection of Internet access provider connections can be carried out on any grounds in Bellovin et al.

In response, again, please note that claims 7, 11, and 12 do not claim *ISP connections* nor *Internet access provider connections* as argued by the applicant. With reference to the explanations regarding network service provider connections provided in A and B above, Bellovin et al. in fact do teach (i) a step and means for determining, at the source network site (202), at least one of a round trip time value (round trip time) and a packet success rate value (packet lost over the hops) for each combination of individual source and destination network service provider connections configurable among the first and second plurality network service provider connections (round trip time and packet lost over the hops for each route/combination of source and destination connections, i.e. 202A-A-C-D and 202B-G-F-D, is calculated, col. 5, lines 63-col. 6, lines 1-15 and 42-60), and (ii) a step or means for selecting, at the source network site (202), a first network service provider connection (a connection AP 202B-G) among the first plurality of network service provider connections (202B-G and 202A-A) and a second service

provider connection (G-F-D) among a second plurality of network service provider connections (G-F-D and A-C-D) on the basis of at least one of the determined round trip time value and the determined packet success rate value for each combination of source and destination network service provider connections (the Internet access provider 202 selects a connection AP 202B-G and a connection G-F-D as a route for web site 210 because of its low congestion, i.e. round trip delay and packets lost over the hops, col. 5, lines 63-66 and col. 6, lines 42-60).

D. With the explanation given in A, B, and C above, claims 7-9, 11, and 12, therefore, remain rejected.

Conclusion

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nittaya Juntima whose telephone number is 571-272-3120. The examiner can normally be reached on Monday through Friday, 8:00 A.M - 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on 571-272-3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nittaya Juntima
October 25, 2004

CHAU NGUYEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600